



# Network Video Recorder

**User's Manual v1.0**

Model: **SVR-104 Basic**



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## **Copyrights & Trademarks**

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All names of people and organizations used in this document's examples are fictitious. Any resemblance to any actual organization or person, living or dead, is purely coincidental and unintended.

## System Requirements

The following are minimum system requirements for the system to operate Embedded Network Video Recorder (ENVR):

### Operating System

Microsoft® Windows® 2000 Professional, Windows® XP Professional (32 bit) or Windows® Server 2003 (32 bit)

### Browser

Microsoft Internet Explorer 6 or above

### CPU

Minimum Intel® Pentium® 4 2.4 GHz or higher (Dual Core is recommended)

### RAM

Minimum 1 GB of RAM, 2GB or above is recommended

### Network

Minimum 10/100 Ethernet (Gigabit Ethernet is recommended)

### Graphics Adapter

AGP or PCI-Express, minimum 1024×768, 16 bit colors.

(We highly recommend to work above the 1024 x 768 resolution to get the full experience of the software)

- ***Make sure your display DPI setting is set to default at 96DPI***
- ***To set DPI value, right-click on desktop, choose "Settings" tab >> "Advanced" >> "General"***

## Contents Inside the Installation CD

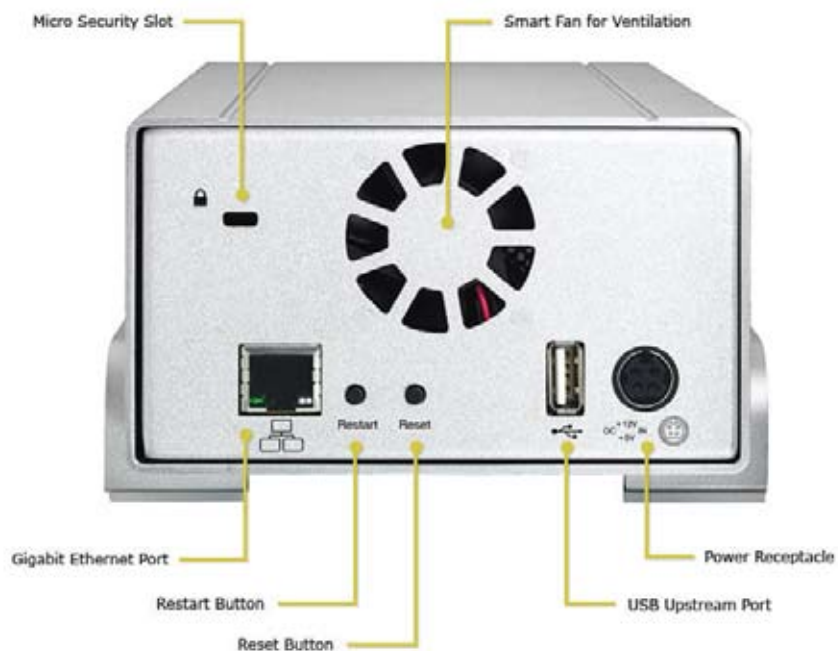
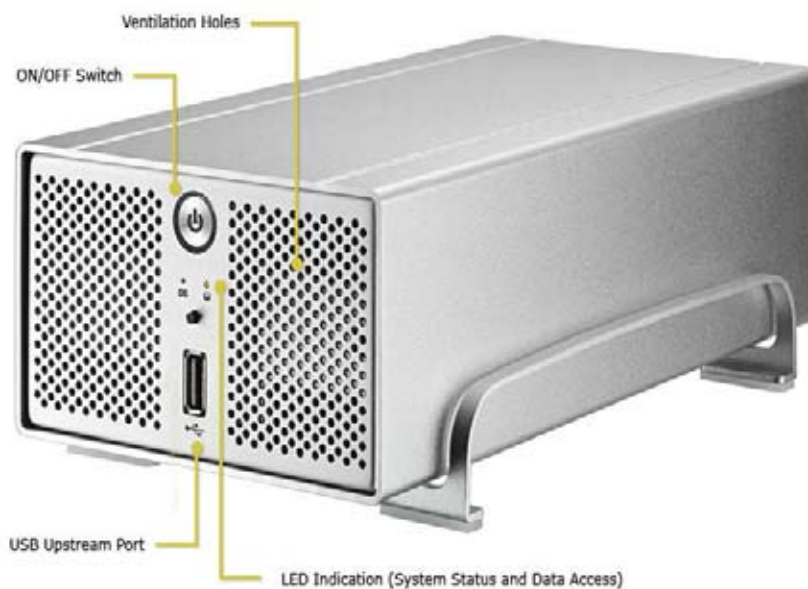
- Adobe Acrobat Reader
- NVR Search Utility
- User's Manual
- Quick installation Guide
- Datasheet

## Product Description

The SEEnergy SVR-104 Basic is designed for use within a surveillance system, and performs recordings and playbacks pictures from network cameras in the system. It is designed for small scale applications such as retail store. Up to 4 cameras can be connected via a network and it is possible to record their camera pictures. It is possible to perform the settings or operate the NVR using a web browser installed on a PC connected to a network and live videos can be viewed on major mobile devices through its web browser. Recorded video can be played back from remote site by a PC. It is possible to perform the settings and operate this unit. SVR-104 Basic is compatible with most major brand cameras and its ability to automatically search and find the available cameras on the network can greatly reduce the user effort when configuring the system.

- **Manage up to 4 Network Cameras**
- **Compatible with Major Brand Cameras**
- **High Quality Live/Playback Video**
- **Export Playback Videos to AVI**
  - **Two-way Audio**
  - **SEEnergy Smart Camera Search**
  - **Mobile Devices Remote Monitoring**
  - **Pure Web Based Administration**

## Hardware Illustration



## LEDs and Buttons

**Power Button:** (Blue when ON) Press to turn on/off the system

**Front LEDs:**

green	yellow
1. OS	2. HDD

### OS LED

**Solid green:** System ready

**Off:** System Off

**Blinking:**

1. System shutting down
2. Upgrading firmware

a) Through USB drive: Blinking indicating the upgrade is in process. Once firmware upgrade completes, the LED goes off. Manually turn off the power and turn it back on would be required afterwards.

b) Through the web UI: Blinking indicating the upgrade is in process. Once firmware upgrade completes, the LED goes off. The NVR will then restart automatically. Once it finishes restarting, the LED should turn to solid green to indicate the system is now ready.

3. Restoring previously saved configuration file:

a) Through USB drive: The LED should blink to indicate the process has started. The LED will then go off to indicate the process is complete. Manually turn off the power and turn it back on would be required afterwards.

b) Through Web UI: The LED should blink to indicate the process has started. The LED will then go off to indicate the restoring is complete and the system is restarting. The OS LED should indicate in solid green once the system becomes ready.



### Recording LED

Solid amber: recording

Off: not recording

Blinking: Manual recording (When "manual recording button") is pressed

*\* To start manual recording with the "manual recording button", press and hold the button for 2 seconds then release it. Follow the same procedure to stop.*

### Ethernet Port LED

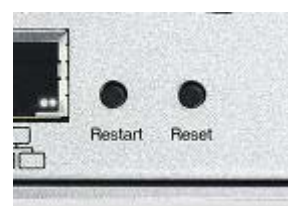
The green LED on the left indicates the link connection and the LED on the right indicates the speed

Speed	green	yellow	green	yellow
	10Mbps	1000Mbps	100Mbps	100Mbps



### Restart Button

Press and release the button for hardware restart. The OS LED should go off during the restart to indicate the system is restarting. The LED should indicate in solid green once the system becomes ready.



### Reset Button

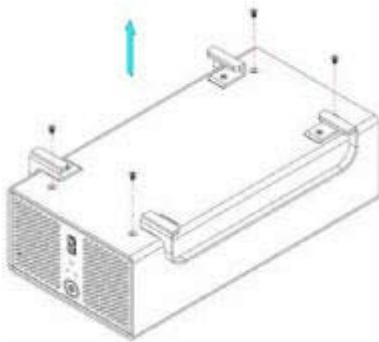
Press this button will restore the system's settings to factory default values. To start, press and hold the button for 5 seconds then release it once the OS LED goes off. The OS LED should indicate in solid green once the system becomes ready.



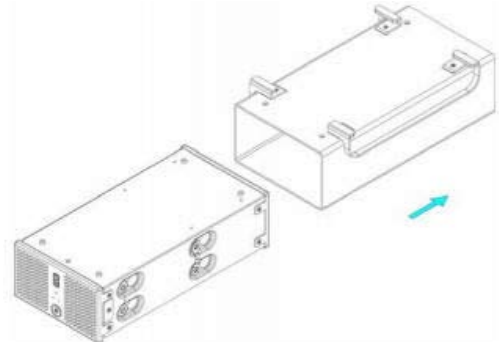


## Hard Drive Installations

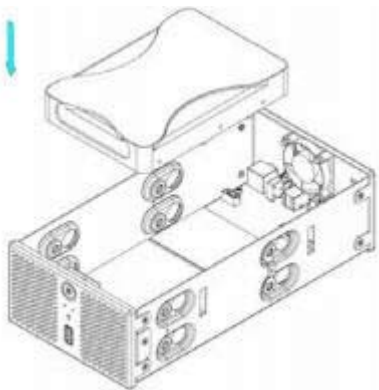
1. Remove the four screws from the bottom of the case.



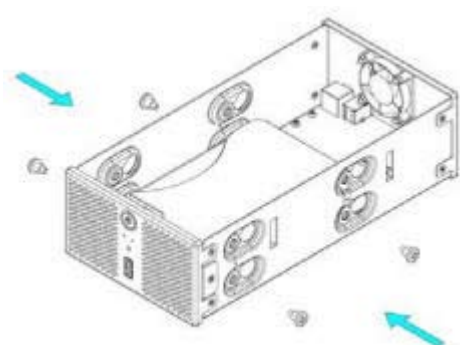
2. Push the inner enclosure out, and remove the outer chassis.



3. Install the first hard drive by placing it in the enclosure and connecting the SATA plus power cables.



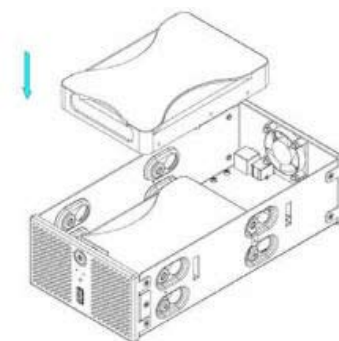
4. Mount the drive with two screws on each side.



5. Attach the thermal probe with the tape provided to the first hard drive.

Choose a location in between the two drives but without damaging the thermal probe when installing the second drive.

6. Install the second hard drive by placing it in the enclosure and connecting the SATA plug power cables.



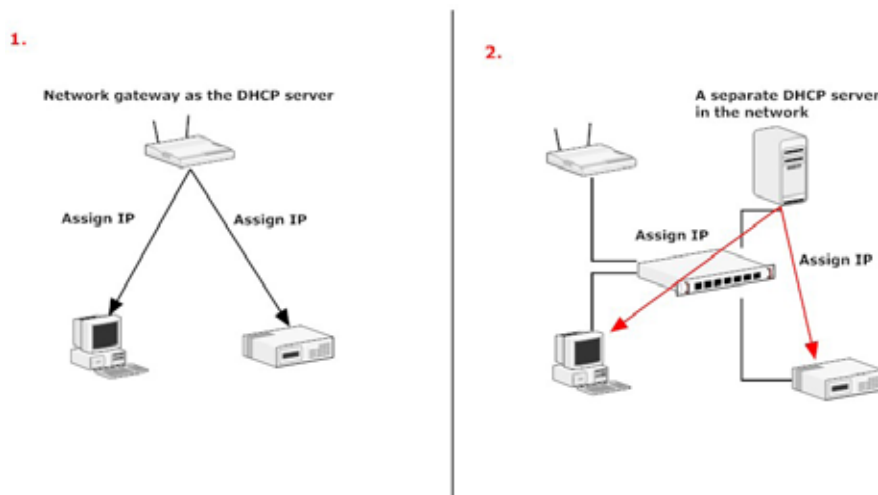
## Connect to the NVR

There are various ways you can connect to the NVR and below are the suggested methods for different network setup:

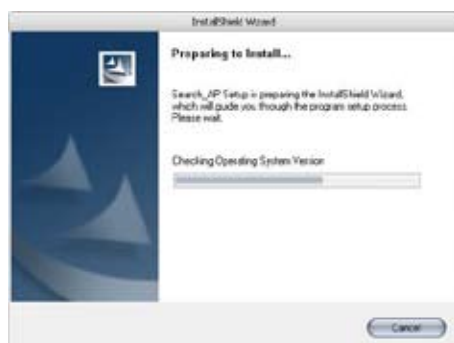
- The NVR is placed in a network with a DHCP server: Connect to the NVR by using **"NVR Search" Utility**
- The NVR is placed in a network without DHCP server (or you are connecting to it directly): **Access NVR with its default IP**

### Use NVR Search Utility

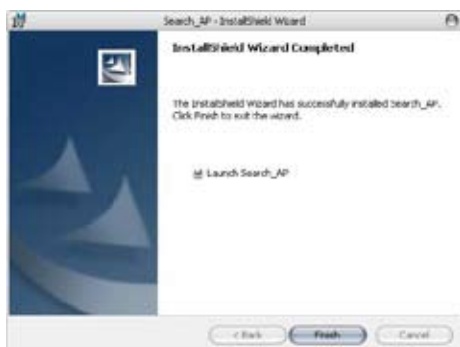
If the NVR is placed in a corporate network or a local area network where a DHCP server is already presented, install the "NVR Search" utility on the CD from a computer that is on the same network and locate the NVR with its IP address that is assigned by the top-level DHCP server.



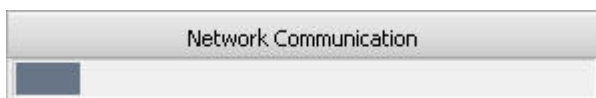
To begin, launch the "NVR Search" utility from the CD and proceed with the installation:



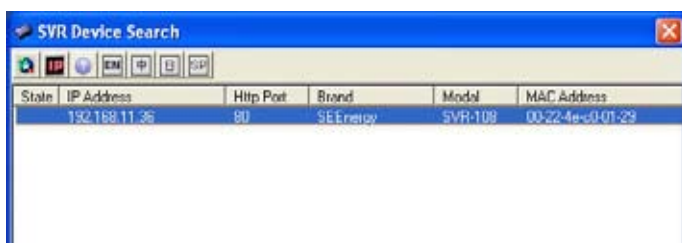
Once the installation is complete, check the "Launch the Search AP" option and click "Finish":



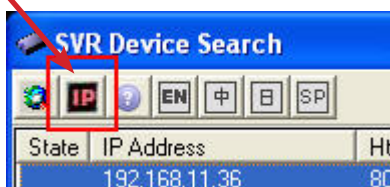
The search should start automatically and its status should be displayed:



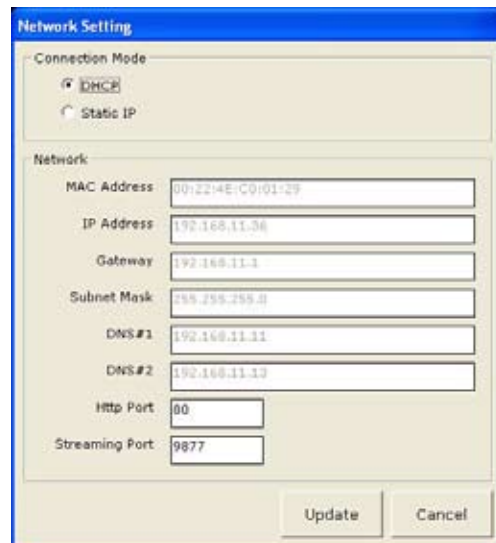
The NVR should be located and its IP address should be displayed: Double-click on it and the program should automatically access the NVR's web administration page from your default browser



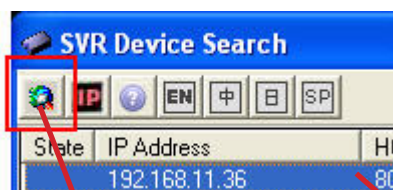
You may change NVR's IP address by click on the button highlighted below.



You will be prompted for the NVR's login information before proceeding to change device's IP address.



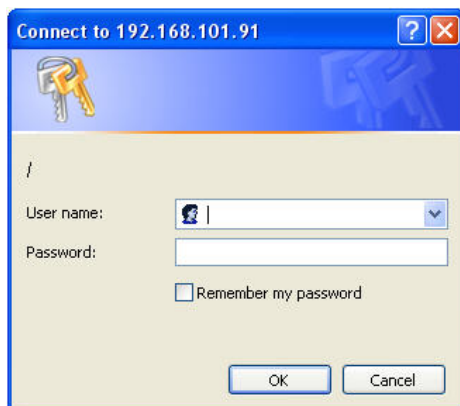
You may click on the button highlighted below to perform search again. Or double-click on any of the search results to access NVR's web administration page



perform search again

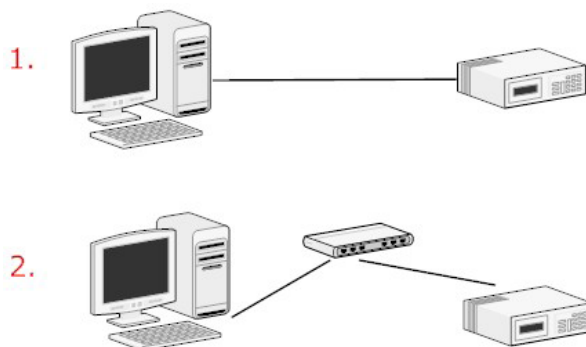
access NVR's web administration page

You should be prompted for the NVR's username and password. Enter its default username "**admin**" and password "**admin**" and then click "OK" to enter the system

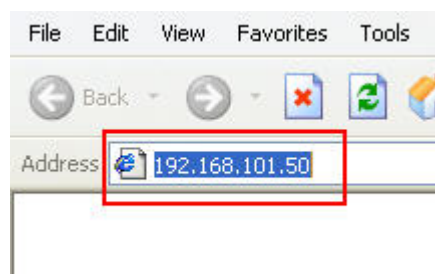


### Access NVR with its default IP address

The NVR comes with a pre-configured static IP "**192.168.101.50**". However, it is only used when there is no DHCP server presented in the network. The NVR will turn on its DHCP server function and act as the DHCP server in the network. To connect to the NVR, use a PC that is on the same network over a switch or hub, or connect the PC directly to the NVR using a crossover CAT5 Ethernet cable.



The PC that is connected directly to the NVR (or within the same local area network) should receive an IP from it. Simply access the NVR from your web browser with its IP address



Again, you should be prompted for the username and password. Enter its default username "**admin**" and password "**admin**" and then click "OK" to enter the system



## SVR-104 Basic



**The “Live View” page provides the following functions:**

- Retrieve camera's video stream
- Retrieve camera's status
- Perform Live Sequence Viewing
- PTZ Control
- Perform PTZ Preset Sequence viewing
- Perform manual recording
- Take snapshot
- Receive audio of a video stream
- Send audio
- Control “Buzzer”
- Change web UI display language

## 1.1 Retrieve camera's video stream




The camera list is expanded and displayed on the Live View page.

- Click "All" to display videos in the quad-video mode
- Click on any camera to display video in single-view mode

## 1.2 Retrieve camera's status

The camera list can show each camera's current status. Each status is represented with different colors and their meanings are explained on the left

 Camera is connected

 Camera is NOT connected

 Camera is current performing recording

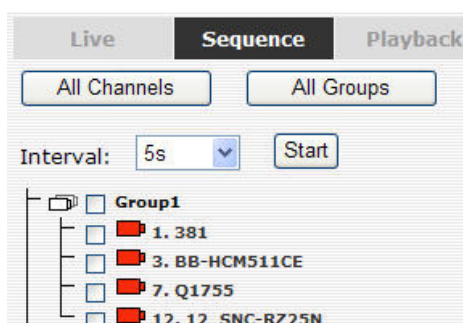
### 1.3 Perform Sequence Viewing

Sequence view is a function that allows you to view multiple video streams from certain cameras in sequence automatically without having to select them one by one.

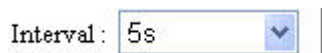
To perform sequence view, select "SEQ View" from the upper-left hand corner



Next, select one or more camera(s) or camera group(s) for sequence viewing



Then select dwell interval from the drop-down menu



Finally click "Start" to start sequence viewing

*\* Click "All Channels" to quickly select all available channels and start sequence view in single-view mode.*

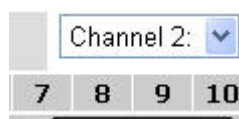


## 1.4 PTZ Control

PTZ control provides functions to pan, tilt, zoom a PTZ camera as well as the ability to adjust camera focus and iris



Camera(s) that are currently being selected for live viewing will be listed in the PTZ drop-down menu. Simply select a camera then use the PTZ control panel to control the camera



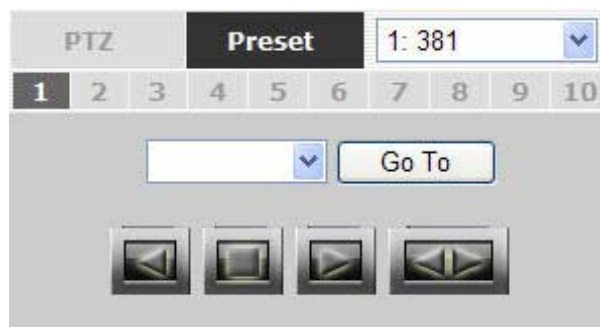
The bar shown below allows you to control the pan/tilt speed



## 1.5 Perform PTZ Preset Viewing

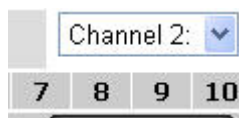
There are three functions provided in the "Preset" section:

- Perform preset point viewing of a particular camera
- Auto pan a particular camera
- Perform preset point sequence viewing

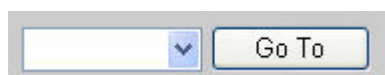


### Preset Point Viewing

Start by selecting a PTZ camera from the drop-down list:



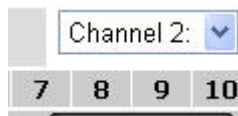
Its available PTZ preset points will be listed in the drop-down list shown below:



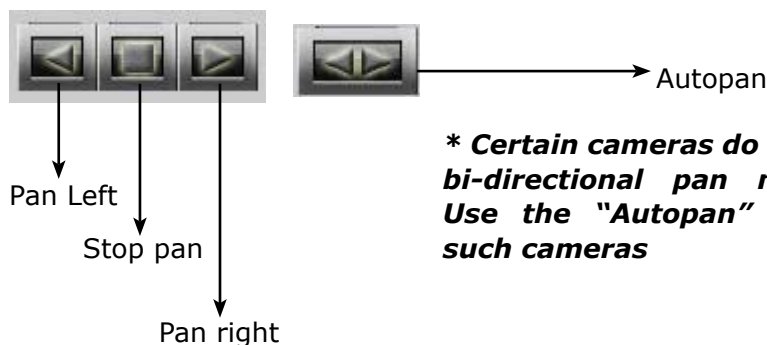
Select a preset position from the drop-down list and click "Go to" to move the live view to that position

## Auto Pan Viewing

Start by selecting a PTZ camera from the drop-down list:

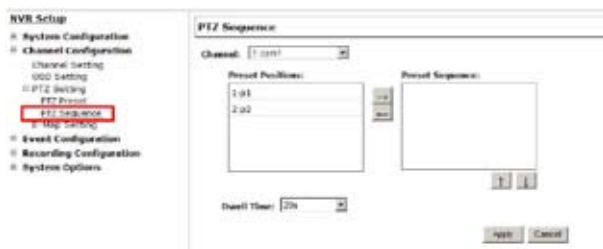


Use the Auto Pan control buttons to pan right, left and stop auto pan



## Preset Point Sequence Viewing

This function allows you to view multiple preset points from a video of a camera without having to select them one by one. Once you have defined the preferred preset points in "**Channel Configurations**" >> "**PTZ Setting**" >> "**PTZ Sequence**" under the "**Setup**" menu, click "Start" in the lower-left hand corner in Live View under "Preset" and the recorder will begin to display videos from those preset points in sequence automatically until you click "Stop"



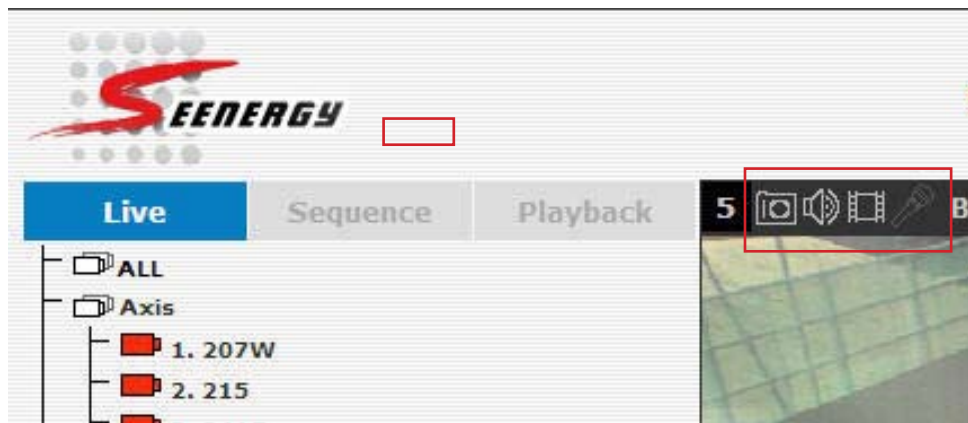
"In the Setup page"







In the Live View



## 1.6 Live Video Control Buttons

Each live video window comes with control buttons with functions described below:




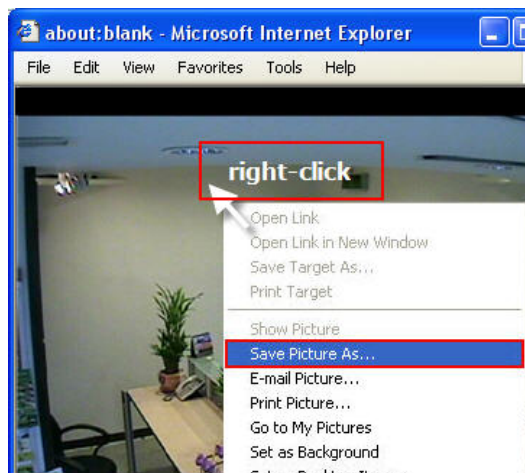
-  Take a snapshot of a live video
-  Turn on/off audio of a live video
-  Start/stop recording of a live video (manual recording)
-  Audio post function



-  Full screen view of a live video
-  Display video in its original ratio

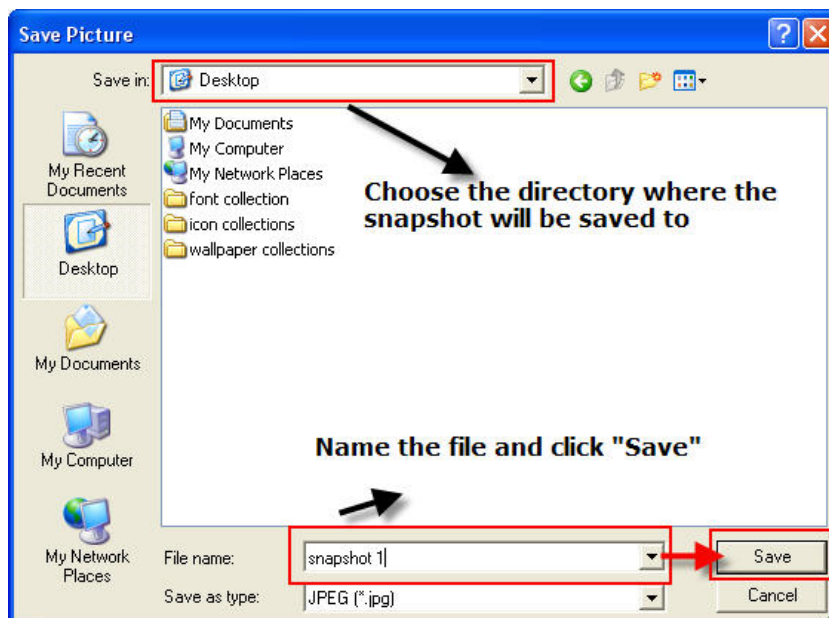
## Take a snapshot of a live video

To take a snapshot of a live video, click the  button and the snapshot of the video will be displayed in a pop up window shown like below




Right-click anywhere on the image and select "Save Image as" from the pull-down menu


In the pop up dialog, name the image file and choose which directory the image will be saved to and click "Save"




### Full Screen View of a Live Video


To view a video in full screen, click the  button. To exit full screen video, double-click anywhere on the video.


### Turn On/Off Audio of a Live Video

You can retrieve audio from a particular camera. Simply click the  button to do so.

The button will show in different color once the audio is turned on.  Click on it again to turn off audio.

### Start/Stop Recording of a Live Video

You can manually start or stop recording of a live video by using the  button.

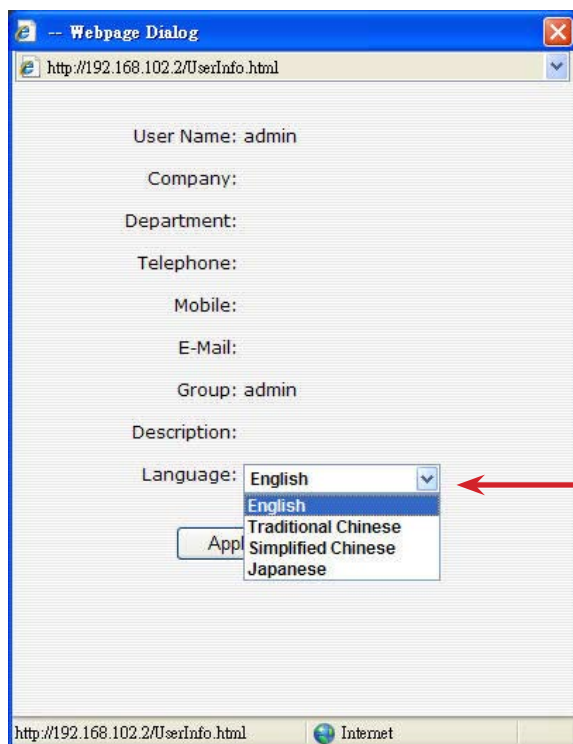
The button will show in different color once the recording is started manually.  Click on it again to stop recording.

### Audio post

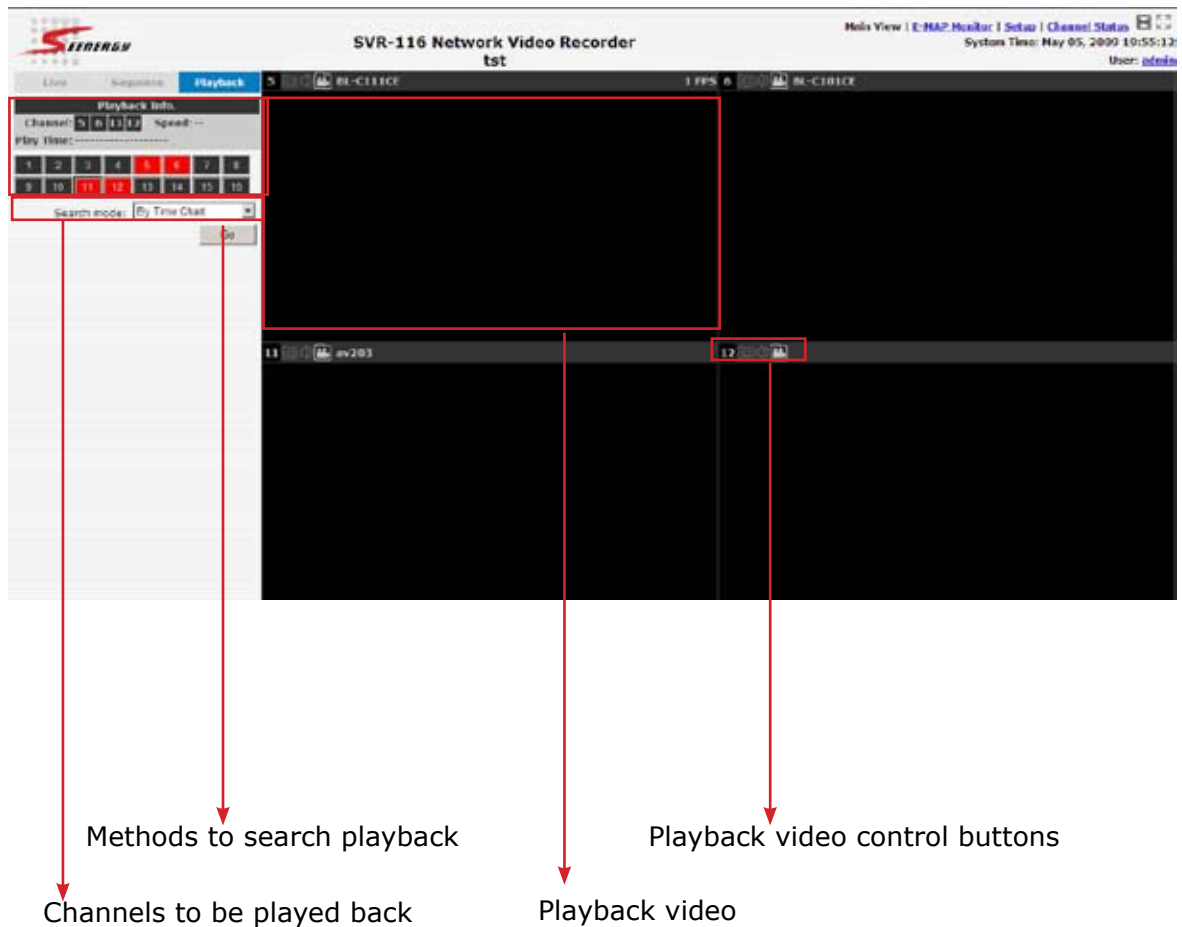
This function allows user to speak from a PC through a microphone and the audio can be played at the camera side if it has a speaker connected to it.

## 1.7 Change Web UI Display Language

You can change the web UI display language from the current login username link located at the upper-right hand corner. Click on the link opens up a new window which displays detail information about the user as well as a drop-down menu which lets you change the display language.



## 2. Playback



Playback is a function that allows you to play one or more videos that were previously recorded by a chosen recording method or due to an event trigger. The NVR offers synchronized playback from up to 4 channels and various types of search methods are provided to help you find the footage you need quickly.

You can turn on or off the audio of a recorded video at your choice if audio was also recorded during the recording of the video.

Playback video can be viewed in full screen and snapshots can be taken and saved during a video playback.



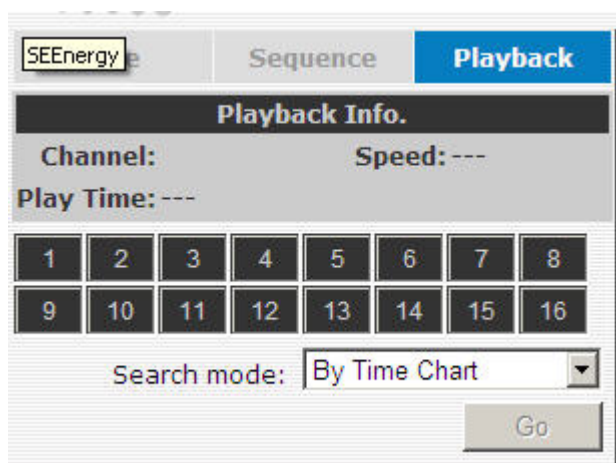
## 2.1 Methods to Search Playback Videos

The NVR offers three methods to quickly help users find videos that were previously recorded:

- Search by time: *Specify a time range and search videos recorded within that range*
- Search by event: *Find videos that were recorded due to event triggers*
- Play by start time: *Enter a specific time a video was recorded to start playing back the video*

### Search by time chart

- Start by selecting which channel(s) you would like to perform a search on:



\* Selected channels will be marked in red



- Select "Search by time chart" from the "Search Method" drop-down list and click "Go" to start the search:



- Results will then be displayed in a "Date/Channel" table and boxes marked in blue represent videos found in those dates:

Date:

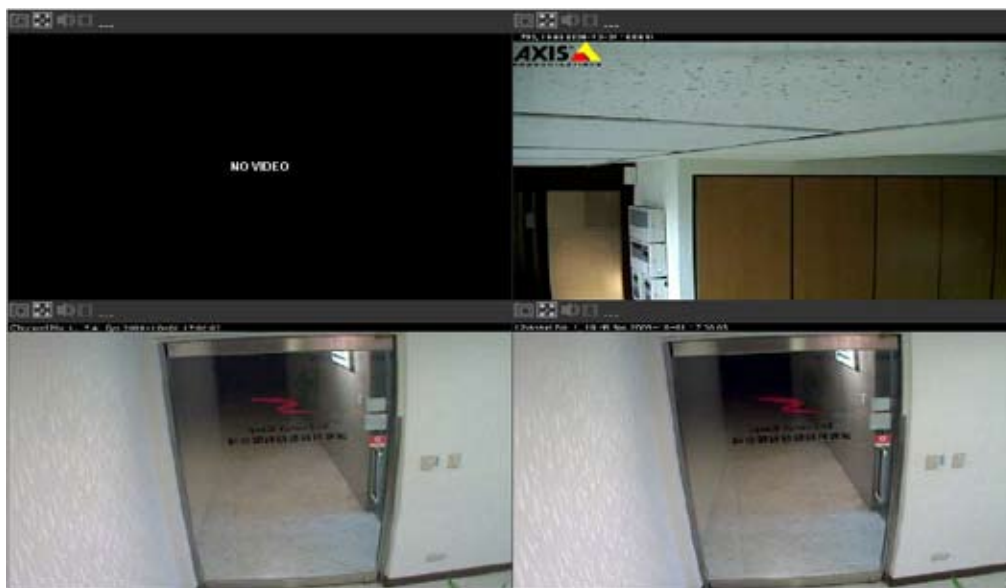
CH1	Ch2	CH3	CH4	
				1
				2
				3
				4
				5
				6
				7
				8
				9
				10
				11
				12
				13
				14
				15
				16
				17
				18
				19
				20
				21
				22
				23
				24
				25
				26
				27
				28
				29
				30
				31

- Click on any blue cell box should direct you to the hour/channel table if there were multiple videos recorded during that date:

CH1	Ch2	CH3	CH4	
				1
				2
				3
				4
				5
				6
				7
				8
				9
				10
				11
				12
				13
				14
				15
				16
				17
				18
				19
				20
				21
				22
				23
				24

\* Videos from other cameras that are recorded on the same date will also be displayed

- Click on the cell box again will start playing back the videos if you have reached the end of search results:



- Videos found from other cameras that were recorded at the same time will also be played.

## Search by event

- Start by selecting which channel(s) you would like to perform a search on:



\* Selected channels will be marked in red



- Select "Search by event" from the "Search Method" drop-down list and click "Go" to start the search:
- Results will then be listed like what is shown below (displays the oldest record top down). Click on a particular result to start the playback:



\* You can click "Next Search" to display the next 15 results.

- You may also specify a new start time to search and display results from then on. You can restrict the number of results to be displayed at once (max. 30) and perform the search again

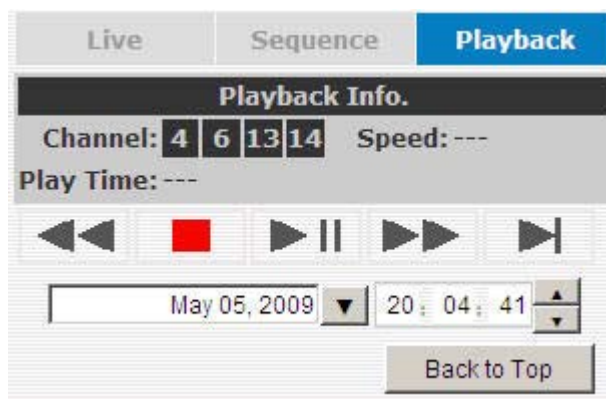


### Play by specific time

If you know when a recording was taken place, you may choose the "Play by start time" from the "Search Method" drop-down list



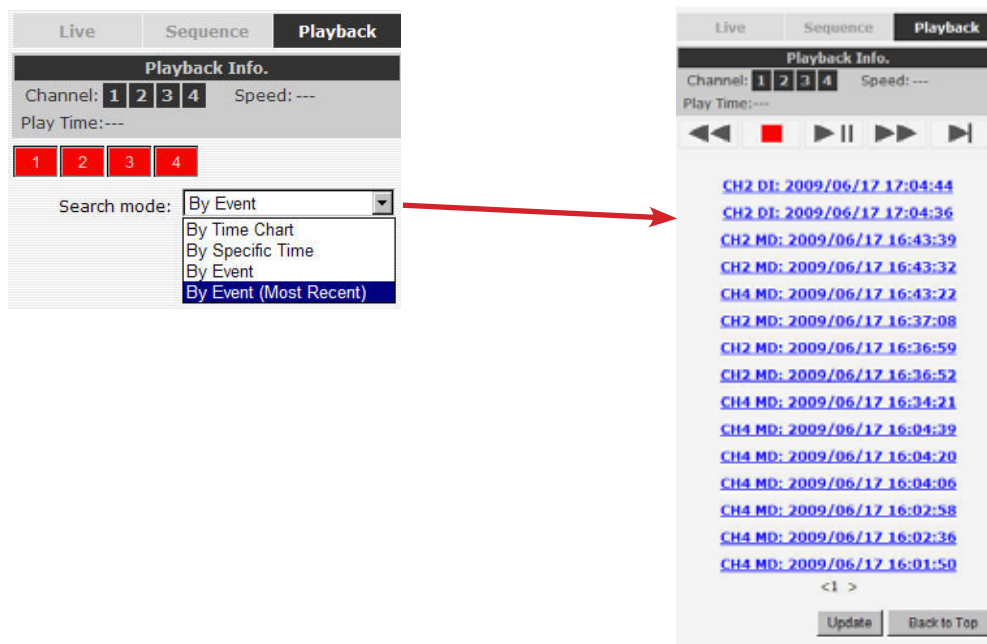
Then you will be prompted to enter a specific time and date for the recorded video.



Use the  button to select month, date, and year

## Search by event (Most Recent)

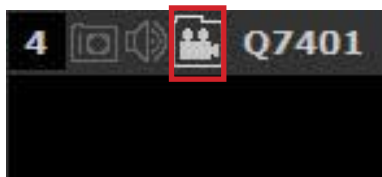
This function quickly displays the most recent event recordings from the selected channels, displaying the most recent result top down. You may click "Update" to update the list to display the most recent result



## 2.2 Export Playback Videos to AVI Files


User can export the recorded playback videos stored on SVR-116 to a local computer and save them in AVI file format. The files can then be played on the PC by a 3rd party media player such as VLC player or Windows Media player.

Once you locate the recorded videos with steps described in the previous section, hit the "Export AVI" button on a video window of the video you wish to export.



A new dialog will pop up and allows you to specify the time frame (or length) of the video you wish to export

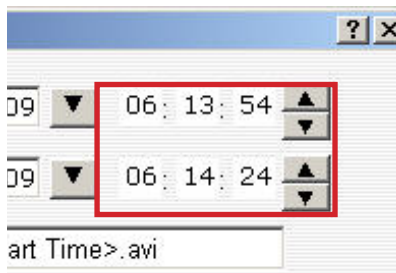


Click the  button to pull down the calendar to help you specify the month, date and the year

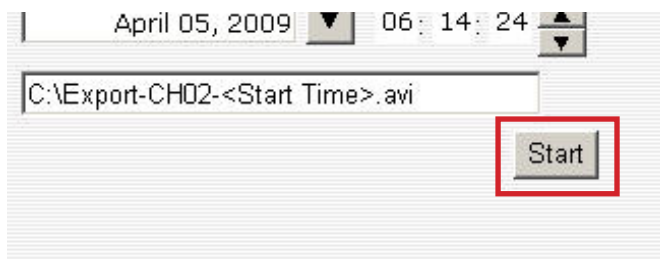




Specify the starting and ending hours of the video by entering numbers in the text boxes



Hit the "Start" button to start exporting. The file will be automatically named and saved under the C:\ partition



You will be notified once the process is completed successfully



The exported AVI file will be saved under the C partition



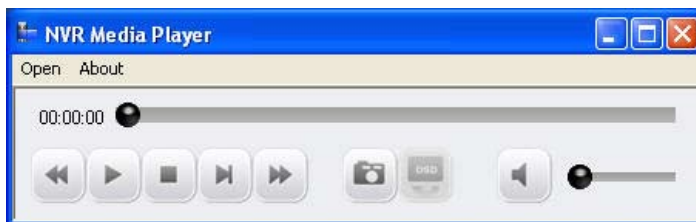
\* *ffdshow* is required in order to play the exported AVI file with Windows Media Player. You can get it at "<http://sourceforge.net/projects/ffdshow-tryout/>" to download the "ffdshow\_beta6\_rev2527\_20081219.exe"



### 2.3 Play Export Playback Videos with NVR Media Player

You can also use the SEEnergy NVR Media Player that is available on the CD to play the exported AVI files. This can save you the trouble of installing third-party media player or codecs when playing the exported AVI videos.

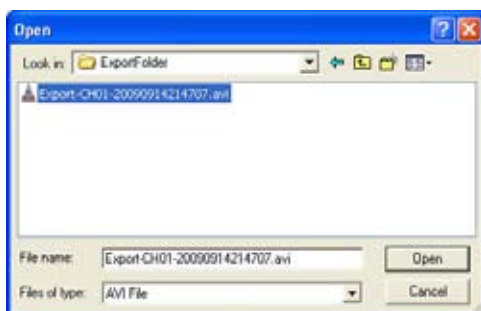
Run the NVR Media Player on the CD:



Click "Open" >> "AVI File"



Locate the exported AVI file, and click "open". (normally under "C:\ExportFolder")



The video will then start playing





video play control buttons:  
Rewind/Pause (Play)/Stop/Next Frame/Fast Forward/  
Screenshot/Display OSD

video play time

video play control bar

Volume Control

Audio Control (click to enable/disable)

Video Play Speed

## 3. System Setup

### 3.1 System Configurations

The "System Configurations" page provides users options to setup the device quickly and properly. After properly configuring all settings in all the sub-pages, users should expect a fully working network video recorder that is ready to manage cameras on the network. We will start by configuring its network settings to make sure it works correctly in your network. Next, we will help you adjust the system time so videos will be recorder with correct timestamp. To better secure the system for unwanted disturbance, we will guide you on setting up user's account and privileges to prevent settings gets altered by users other than the system administrator. Lastly, we will tell you what you should expect after installing a hard disk and how to prepare the hard disk for the video recording.

#### 3.1.1 Network Settings

The screenshot displays the web interface of an SVR-116 Network Video Recorder. The title bar at the top reads "SVR-116 Network Video Recorder" and "tst". On the left, a "Setup" menu is visible with options: System Configuration (selected), Network Setup, Time and Date, Users Account, Group Privilege, and Disk Setup. Under "System Configuration", there are sub-options: Channel Configuration, Event Configuration, Recording Configuration, and System Options. The main content area is titled "Network Setting" and contains the following fields and controls:


- Connection Type: A dropdown menu set to "DHCP".
- IP Address: 192.168.102.2
- Subnet Mask: 255.255.252.0
- Gateway: 192.168.101.1
- DNS1: 192.168.11.11
- DNS2: 192.168.11.13
- HTTP Port: 80
- Streaming Port: 9977
- UPnP Port Forwarding: An unchecked checkbox.
- External Port: 8000, with "Test" and "Force Change" buttons next to it.

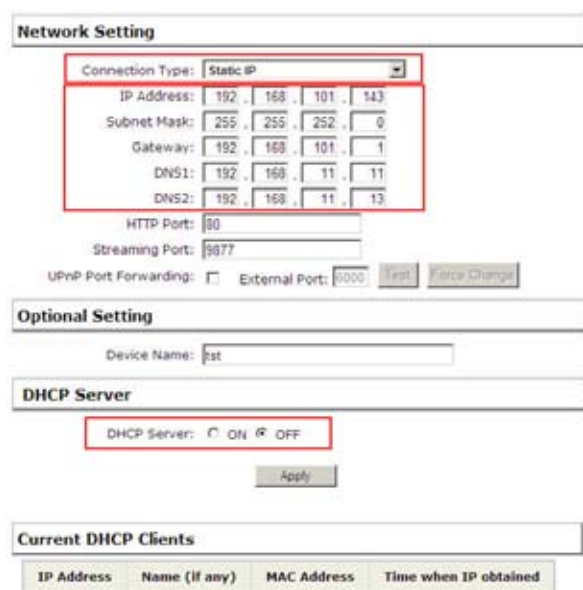
Below the "Network Setting" section is an "Optional Setting" section with a "Device Name" field containing the text "tst" and an "Apply" button at the bottom right.

You need to adjust settings in this page for the device to work properly in your network. It is critical that settings here are configured correctly based on your network configurations so that the recorder can be administered through the local area network and cameras can be connected from it.

By default, the recorder is set to obtain IP address from DHCP server, it should be sufficient in most network environments, and most likely you should not need to alter anything in this page. To locate the recorder, simply use the SEEnergy IP Utility with steps described in page 12.

If you wish to set the recorder to use a static IP address in your local area network,

1. Choose "Static IP" from the "Connection Type" drop-down menu
2. Enter the IP address, subnet mask, default gateway address and DNS server address for the recorder
3. Enable "DHCP Server" under "DHCP Server" if you wish to use the recorder as a DHCP server, or leave it disabled if there is already a DHCP server in the network 
4. Click Apply for the settings to take effect



**Network Setting**

Connection Type: **Static IP**

IP Address: 192 . 168 . 101 . 143

Subnet Mask: 255 . 255 . 252 . 0

Gateway: 192 . 168 . 101 . 1

DNS1: 192 . 168 . 11 . 11

DNS2: 192 . 168 . 11 . 13

HTTP Port: 80

Streaming Port: 9877

UPnP Port Forwarding: ☐ External Port: 8000

**Optional Setting**

Device Name: test

**DHCP Server**

DHCP Server: ☐ ON ☒ OFF

**Current DHCP Clients**

IP Address	Name (if any)	MAC Address	Time when IP obtained
------------	---------------	-------------	-----------------------



The recorder can detect the presence of a DHCP server upon startup. It sets itself to use static IP address if there is no DHCP server currently presented in the network. Its DHCP server function is also turned on at the same time to assign IP addresses to cameras that are later connected to the network

o You can manually turn off the DHCP server function if you wish to use a separate DHCP server



Change the recorder's IP address would require the recorder to restart. Restart the device under "system Options" >> "Maintenance" for the settings to take effect.

### 3.1.2 Time and Date

Set the time and date by selecting the time zone according to your location. It is imperative that you set the recorder's time correctly to avoid the following errors:

- Incorrect display time for playback videos
- Inconsistent display time of event logs and when they actually occur

After selecting the time zone, choose an option below to set the recorder time

- **Manual** – Use the drop-down list and configure the time manually
- **Sync with NTP server** – enter the hostname or IP address of a valid NTP server and set how often the recorder should synchronize the time with it by using the "Update interval" drop-down menu
- **Sync with PC** – Check this option to synchronize the recorder time with the PC that you are currently using to access the recorder

### 3.1.3 User Account

The recorder can be accessed by multiple users simultaneously. You can add, remove, and edit users by using options provided in this page to keep user information organized. Each recorder comes with a built-in "admin" account with password "admin". It's highly recommended to change the password upon your initial login.

#### To change the password of the "admin" account:

1. Click and highlight the "admin" account in the account list and click "Edit"
2. Its information should be displayed in "User Account Information"
3. Enter a new password in the "Password" field and enter it again in "Confirm Password"

#### To add a new user:

- Enter a username and password in "User Account Information". All other fields are optional for your own reference.
- Select a group from the "Group" drop-down menu to assign the new user to a particular group
- Enter a short description for the account if you wish
- Click "Apply" to finish configuration

### 3.1.4 Group Privilege

Group Privilege is where you can create multiple customized access policies for situations if you need the recorder to be accessed by users other than the administrator. You can do so by creating a group, and then remove access privileges for certain configuration pages or cameras. Users that are created and assigned to this group will have limited access instead of full administration rights.

The recorder comes with seven built-in groups and five built-in privilege profiles, except the “admin” and the “guest” accounts; the other five groups are fully customizable or you can simply assign a group with one of the default privilege profiles. You can, however, assign more than one users to the “admin” account if you wish to do so. The guest account comes with a “view-only” privilege in the “Live View” page, and users in this group do not have the power to make any changes in the “Live View” page or have access to pages other than the “Live View” page.

To create a group, select a group from the “Group” drop-down

You can change the group name by clicking the “Change Group Name” button. A text box will be displayed for you to enter the new group

Choose what type of privilege you would like this group to have from the "Privilege Type" drop-down menu

Group:    
Privilege Type:

Its access privilege will then be displayed. You can alter its settings by allowing or denying access to other cameras using the checkboxes instead of accepting the defaults

**Group Privilege Setting**

Group:    
Account Type:

Live:

<input type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4	<input checked="" type="checkbox"/> CH5	<input checked="" type="checkbox"/> CH6	<input checked="" type="checkbox"/> CH7	<input checked="" type="checkbox"/> CH8
<input checked="" type="checkbox"/> CH9	<input checked="" type="checkbox"/> CH10	<input checked="" type="checkbox"/> CH11	<input checked="" type="checkbox"/> CH12	<input checked="" type="checkbox"/> CH13	<input checked="" type="checkbox"/> CH14	<input checked="" type="checkbox"/> CH15	<input type="checkbox"/> CH16

Playback:

<input type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4	<input checked="" type="checkbox"/> CH5	<input checked="" type="checkbox"/> CH6	<input checked="" type="checkbox"/> CH7	<input checked="" type="checkbox"/> CH8
<input checked="" type="checkbox"/> CH9	<input checked="" type="checkbox"/> CH10	<input checked="" type="checkbox"/> CH11	<input checked="" type="checkbox"/> CH12	<input checked="" type="checkbox"/> CH13	<input checked="" type="checkbox"/> CH14	<input checked="" type="checkbox"/> CH15	<input type="checkbox"/> CH16

Allow use of PTZ:

<input type="checkbox"/> CH1	<input checked="" type="checkbox"/> CH2	<input checked="" type="checkbox"/> CH3	<input checked="" type="checkbox"/> CH4	<input checked="" type="checkbox"/> CH5	<input checked="" type="checkbox"/> CH6	<input checked="" type="checkbox"/> CH7	<input checked="" type="checkbox"/> CH8
<input checked="" type="checkbox"/> CH9	<input checked="" type="checkbox"/> CH10	<input checked="" type="checkbox"/> CH11	<input checked="" type="checkbox"/> CH12	<input checked="" type="checkbox"/> CH13	<input checked="" type="checkbox"/> CH14	<input checked="" type="checkbox"/> CH15	<input type="checkbox"/> CH16

System Configuration:

<input checked="" type="checkbox"/> System Configuration	<input checked="" type="checkbox"/> Channel Configuration	<input type="checkbox"/> Event Configuration
--	---	--



### 3.1.5 Disk Setup

Once you install a hard disk to the recorder, you would need to initialize it so that it can be ready for recording. You can obtain basic information about the disk you installed in this page

To initialize it, simply click the "Format" button

#### Setup

##### System Configuration

Network Setup  
Time and Date  
Users Account  
Group Privilege  
Disk Setup

##### Channel Configuration

##### Event Configuration

##### Recording Configuration


##### System Options

#### Hard Disk Setting

Disk ID	Disk Type	Capacity	Disk Status	Format
1	Internal	445GB	Online	<a href="#">Format</a>
2	Internal	142GB	Online	<a href="#">Format</a>

[Enable RAID 1](#)

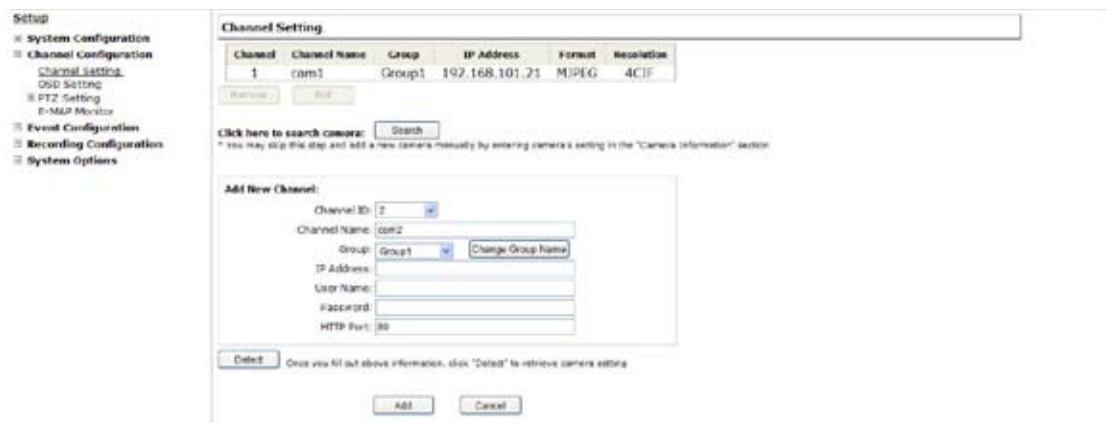
You can also connect external USB thumb drive to the recorder for firmware upgrade.

 To obtain detail information about the disk, go to "System Options" >> "Disk Status"

## 3.2 Channel Configurations

### 3.2.1 Add a Camera

The NVR provides two options for adding a new camera. Users have the option to let the recorder automatically find the cameras or it is possible to enter camera's information and add it manually.



**Channel Setting**

Channel	Channel Name	Group	IP Address	Format	Resolution
1	cam1	Group1	192.168.101.21	MJPEG	4CIF

Click here to search camera:

\* You may skip this step and add a new camera manually by entering camera's setting in the "Camera Information" section.

**Add New Channel:**

Channel ID:

Channel Name:

Group:

IP Address:

User Name:

Password:

HTTP Port:

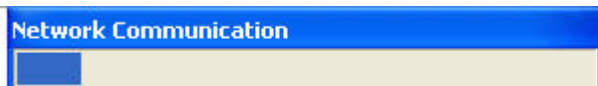
Once you fill out above information, click "Detect" to retrieve camera setting.

#### Automatic Search:

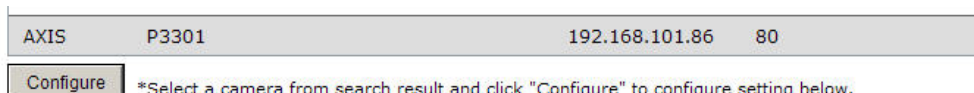
1. Click the "Search" button to perform the camera search. You should be prompted to install Active Control component in order for the search to function properly. Go ahead and click "Install"



2. After that, the search should begin and its status should be displayed:



3. Found cameras should be listed and simply select a camera from the list and press "Configure"



4. Its corresponding information should be displayed in the "Camera Information" section. Enter its username and password and select the channel ID and name the camera.



5. Click on "Detect" to establish connection between the recorder and the camera. If connection establishes successfully, camera's detailed information should be polled and displayed as below



6. Adjust its video format, frame rate, resolution or bitrate...etc if you wish. You can also click on the "Preview" to preview the live video of the camera.

Click "Add" to finish adding the camera



If cameras are marked with "\*" in the search result, it means those cameras are already configured and connected to SVR-116.

1. Add a new camera by manually entering camera's setting in the "Camera Information" manually, then follow step 5 ~6 described above.

	IP Address	HTTP Port	Installed
	192.168.101.40	80	
	192.168.101.42	80	
	192.168.101.41	80	
	192.168.101.47	80	
	192.168.101.43	80	
	192.168.101.23	80	*
	192.168.101.46	80	

## Add a camera manually

Simply follow the instruction described above but instead of using the "Search" function, enter the camera's IP address and credential in the "Camera Information" manually, then follow step 5 ~6 described above.

**Add New Channel:**

2. Channel ID: 3  
Channel Name: cam3  
Group: Group1 [Change Group Name](#)

1. IP Address: 192.168.101.20  
User Name: root  
Password: ●●●●  
HTTP Port: 80

[Detect](#) Once you fill out above information, click "Detect" to retrieve camera setting

Enter manually

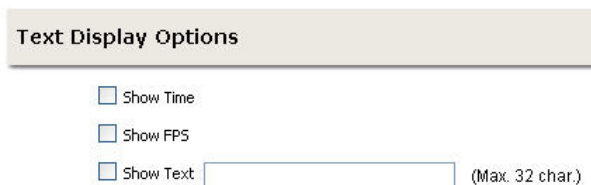
### 3.2.2 OSD Settings

The OSD (On Screen Display) allows users to add informational text message and embed it onto the video. By default, this function is turned off. To add texts to one or more videos,

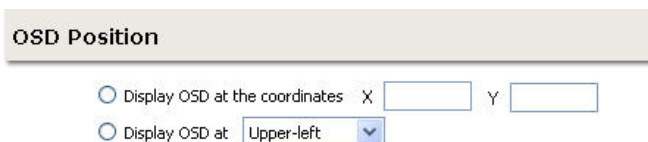
1. Select a camera you would like to add text to and choose "Display OSD"



2. Choose one or more display options if you would also like the recorder to automatically embed the system time or the frame rate for you. Or simply choose to display a custom message of your own



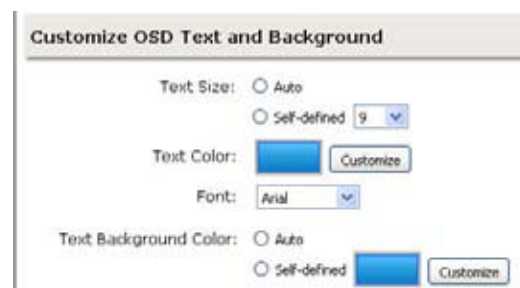
3. Next, define where the text will be displayed by either entering an X/Y coordinate or use the system pre-defined position from the drop-down menu



4. Click on the "Preview" button to see the preview of your setting and click "Apply" to save the configuration

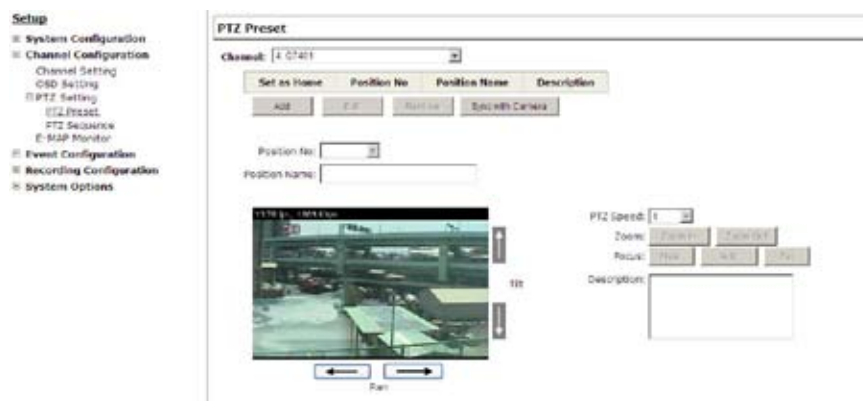


- The texts can be further adjusted with changes to different size, color or font so they can be more visible on the video



### 3.2.3 PTZ Preset Settings

The recorder supports PTZ cameras and can set multiple preset points or retrieve and manage preset points that are set in the camera. This is helpful if you need to monitor multiple spots in one area from a particular camera.



1. To set up PTZ preset points, select a camera from the "Camera" drop-down menu and click "Add"



2. Select a position number for the preset point from the "Position Number" drop-down menu and fill in a name in the "Position Name" field for easier identification



3. Use the PTZ control provided in the configuration page to set the preset point and set the position as the "HOME" position if you wish.

4. Click "Apply" to save the configuration.

### 3.2.4 PTZ Preset Sequence

Once you have multiple preset points defined for a camera, it is convenient for monitoring to set up the sequencing viewing among those preset point and let the recorder automatically switch between them for you.



To configure preset sequence for a camera, select a channel from the "Channel" drop-down menu

The available preset points should be listed in "Camera Presets" section

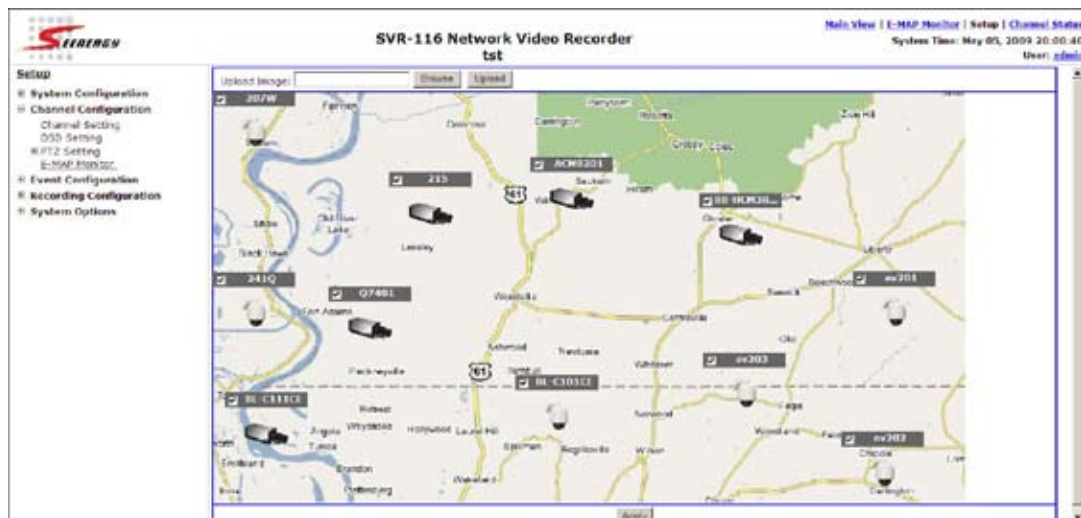
Pick the ones you like for sequence viewing and press the "->" button to move them to the "Preset Sequence" section, then use the up and down buttons to adjust their sequencing positions.

Finally, select a dwell time from the drop-down menu and click "Apply" to save the configuration

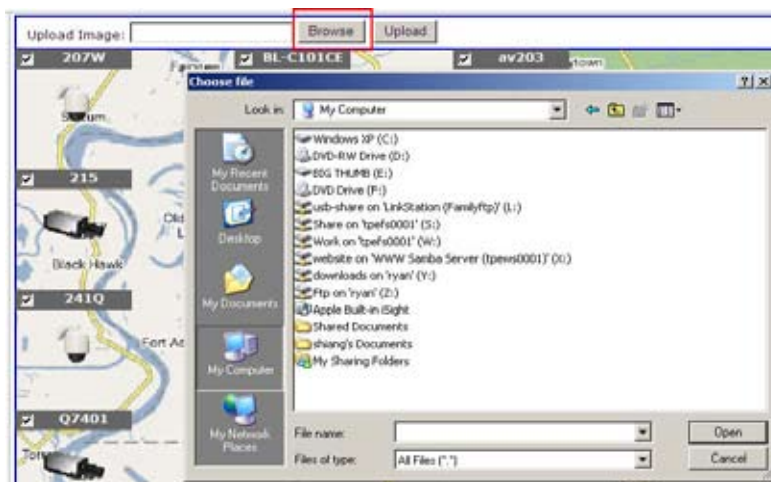
- To start preset sequence viewing, check page 16 for instructions

### 3.2.5 E-Map Monitor

E-Map monitor is a function that alerts users whenever there is an event triggered (e.g. motion detected) from a camera with a geographical perspective. With this function, users can quickly identify which camera has detected an unusual event and where this event is happening. This function works by incorporating the event detection function as well as the recording function, which, as a result, helps users take all the necessary actions when an unusual event occurs.



To replace the map, click "Browse" button to locate the new map image file from the local PC and then click "Upload"





Then click and drag the camera icon to move the camera to define its location.



Access the E-Map Monitor page from the upper-right hand corner menu

[Main View](#) | [E-MAP Monitor](#) | [Setup](#) | [Channel Status](#)

System Time: May 06, 2009 11:27:58

User: [admin](#)



When the NVR receives an event triggered from any of the cameras, their videos will be displayed on the E-Map and you can double-click on the video to enlarge it



### 3.3 Event Configurations

The "Event Configurations" section allows users to define conditions that constitute an event, its corresponding trigger action and when it will be triggered. Such setting can reduce the management overhead and notify the administrator only when it's necessary.

#### 3.3.1 General Settings

The general settings section can help you quickly configure when an event is triggered, how often events are triggered and the corresponding actions when events are triggered.

Start the event configuration by defining the general settings:

#### Define when an event will be triggered

- Choose "Always" or "Only during..." under "Event Trigger Duration"
- For the "Only during..." option, choose the days by using the checkbox and then define the time range in those days in the "Start Time" and "End Time" fields that you would like the event trigger function to be enabled.

#### How often an event is triggered

- Set a time interval under "Event Trigger Interval" to define how often events are triggered

**Trigger action**

Now that you have the event trigger duration and interval defined, choose what action to be taken during an event trigger:

- You can choose to have the recorder send out the first few frames of the video recorder upon an event is triggered
- You can also choose to have the recorder send out a warning message in e-mail or in txt file format and upload it to an destined FTP server

### 3.3.2 Event Servers

Event servers are to be used with event trigger actions. In case of unusual motion detected by the camera or a disk failure, the recorder can send notification with the acceptable format (image/txt) to a destined event server according to the configuration.

#### Configuring an FTP server

To add an FTP server,

1. Start by giving a name to the server that you are adding to the recorder
2. Enter the hostname or the IP address of the FTP server
3. Enter the communication port of the FTP server (usually port 21)

#### FTP Server

Name:

Network Address:  \* Enter host name or IP address

Port:

4. Enter the username and password of the FTP server if it's required
5. Check "Use Passive Mode" if it's required or leave it unchecked to use active mode

**Login Information**

Username:

Password:


**Passive Mode**

☐ Use Passive Mode

6. Click "Test" to verify if all information is entered correctly and the connection to the FTP server can be established successfully
7. Click "Add" for the settings to take effect

**Test**

\*Click "Test" to test the connection to the FTP server:

 If you wish to edit/remove/enable/disable an FTP server, click to highlight one from the profile list and choose the corresponding action button/checkbox

Name	Network Address	Port	Passive Mode	Enabled
test	ftp.test.com	21	No	<input checked="" type="checkbox"/>
<input type="button" value="Edit"/>	<input type="button" value="Remove"/>			

## Configuring an HTTP server

### NVR Setup

- ▣ System Configuration
- ▣ Channel Configuration
- ▣ Event Configuration
  - General Setting
  - DI/DO Setting
  - ▣ Event Servers
    - FTP Servers
    - HTTP Servers
    - SMTP Servers
    - Event Trigger
- ▣ Recording Configuration
- ▣ System Options

### HTTP Servers Setting

Server Name	HTTP Address	Port	Parameter	Enabled
<input type="button" value="Edit"/>	<input type="button" value="Remove"/>			

#### HTTP Server

Name:

Network Address:  \*Enter host name or IP address

Parameter:

Port:

User Name:

Password:

#### Test

\*Click "Test" to test the connection to the HTTP server

1. Start by giving it a name as well
2. Enter the hostname or the IP address of the HTTP server
3. Enter the port that's used to communicate with the server
4. Enter the username and password if it's required
5. Click "Test" to verify if the information is entered correctly
6. Click "Apply" for the settings to take effect

## Configuring an SMTP server

**SMTP Servers Settings**

**SMTP Server 1**

Network Address:

Port:

Sender's Name:

Sender's E-Mail:

☐ Enable Authentication

Username:

Password:

**Test**

Send test email to:

**SMTP Server 2**

Network Address:

Port:

Sender's Name:

Sender's E-Mail:

☐ Enable Authentication

Username:

Password:

1. Enter the hostname or the IP address of the SMTP server
2. Enter the port of the SMTP server
3. Specify the sender's name in the "Sender's name" field
4. Enter the sender's e-mail address
5. Check "Enable Authentication" and enter the username and password of the SMTP server and as it requires authentication
6. Click "Apply" to save the configuration

### 3.3.3 Event Triggers

We have finished defining how an event will be triggered and which servers will be receiving notifications in the previous two sections, now we can finish up the event configuration by setting:

- which channels will have event trigger function enabled
- What is considered to be an event
- Where the warnings will be sent to and how they will be sent

**Select Channels to Enable Event Trigger and which type of event should be triggered**

- Use the checkbox to enable event trigger on the desired channels

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Input	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motion Detection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



- Define which system events should trigger the recorder to send out notifications

When SVR-116 is Triggered by

- |   |   |
|---|---|
| <input type="checkbox"/> Recycle                | <input type="checkbox"/> When SVR-116 Shuts down            |
| <input type="checkbox"/> Disk Full              | <input type="checkbox"/> When SVR-116 Configuration Changed |
| <input type="checkbox"/> Disk Fail              | <input type="checkbox"/> Camera Configuration Changed       |
| <input type="checkbox"/> When SVR-116 Starts up |   |

- Define how the notifications will be sent and where they will be sent to

Trigger Actions

- |                          |                |  |                               |
|--------------------------|----------------|--|-------------------------------|
| <input type="checkbox"/> | <b>E-Mail:</b> | E-Mail Addresses: <input type="text"/> | *use ", " to separate e-mails |
| <input type="checkbox"/> | <b>FTP</b>     | Upload Path: <input type="text"/>      |                               |
| <input type="checkbox"/> | <b>HTTP</b>    |  |                               |

*\* Event trigger may not work for cameras that are placed outside of your local network or on the Internet until the "UPnP Port Forwarding" is enabled in both the NVR and the router.*

### 3.4 Recording Configurations

The "recording configurations" gives users the overall control of how and when a recording is performed and the quality of different types of recordings performed on each channels. It can help the recorder to operate with sufficient system resource by performing recording only when it's necessary with adjustable recording frame rate.

#### 3.4.1 General Settings

You can define the following in "General Settings":

- Pre-Alarm/Post-Alarm recording length
- Recording frame rate
- Enable/disable different recording types on different cameras

**Recording General Setting**

**Recording Buffer**

Pre alarm buffer: 5 sec

Post alarm buffer: 5 sec

**Recording Frame Rate**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Continuous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Schedule	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Event	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Manual	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Recycling**

☒ Enable Recycle

**Camera Recording Setting**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Continuous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Schedule	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

The "recording buffer" allows user to define "pre-alarm" and "post-alarm" time for event recordings. The "pre-alarm" time sets the NVR to record in advance when an event is triggered. The "post-alarm" time sets the NVR to continue recording for a period of time after an event trigger is finished.

#### Recording Buffer

Pre-alarm Buffer:  sec

Post-alarm Buffer:  sec

*\* The "Pre-alarm" function only works when the "Continuous" recording is also activated.*

Recording frame rate allows you to set different frame rate for different types of recording instead of recording at one frame rate only. Use the drop-down menu and select one of the pre-defined frame rates for a particular recording type

#### Recording Frame Rate

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Continuous	1	I Only	1	I Only	1											
Schedule	5	I Only	5	I Only	5											
Event	Full	Full	Full	Full	Full											
Manual	Full	Full	Full	Full	Full											

The section at the bottom allows you to turn on or off a particular recording type on any channels.

#### Camera Recording Setting

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Continuous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
Event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											

### 3.4.2 Schedule Recording

Here you can define the time range of the schedule recording for all channels.

#### To configure a schedule recording:

1. Use the "Channel" drop-down menu and select a camera first

Channel:

2. You can use the schedule table to set the time range. Click the cell boxes then move horizontally lets you set what hours to perform recording during a day. Click and move vertically lets you set what days to perform recording at a specific time.

Schedule Table																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday																								
Monday																								
Tuesday																								
Wednesday																								
Thursday																								
Friday																								
Saturday																								

Clear

\* Each cell box represents 15 minutes of time. Click one or more boxes to omit consecutive recording

3. You can also use the "Quick Configuration" to define recording time range instead of clicking cell boxes one by one on the time table. Simply check what days you would like to perform recording and specify the recording duration by either choosing "All Day" or enter a start and end time for specific recording duration.

Quick Configuration

Days

☐ Mon. ☐ Tue. ☐ Wed. ☐ Thur. ☐ Fri. ☐ Sat. ☐ Sun.

Duration

☐ All day

☐ During Start Time: 00:00 End Time: 00:00

4. Select the "Copy to" option if you would like to set the same recording schedule to another camera.

☒ During Start Time: 00:00 End Time: 00:00

Copy Schedule To Channel:

Apply

### 3.5 System Options

System Options gives users a glance of the overall system status and allows users to perform maintenance tasks such as upgrading firmware, restore/backup device settings or reboot device ....etc.

#### 3.5.1 Device Information

The "Device Information" provides the general information of the device such as firmware version and system time. It also provides information of the current network settings and status.

**Setup**

- System Configuration
- Channel Configuration
- Event Configuration
- Recording Configuration
- System Options
- Device Information
- System Logs
- Maintenance
- DO Status
- Disk Status

**General Information**

Device Name: tst  
Model Name: SVR-116  
Firmware Version: 1.2.0.30014714  
Device Time: Up 0 days 16:56:55, since May 05 2009 18:56:23

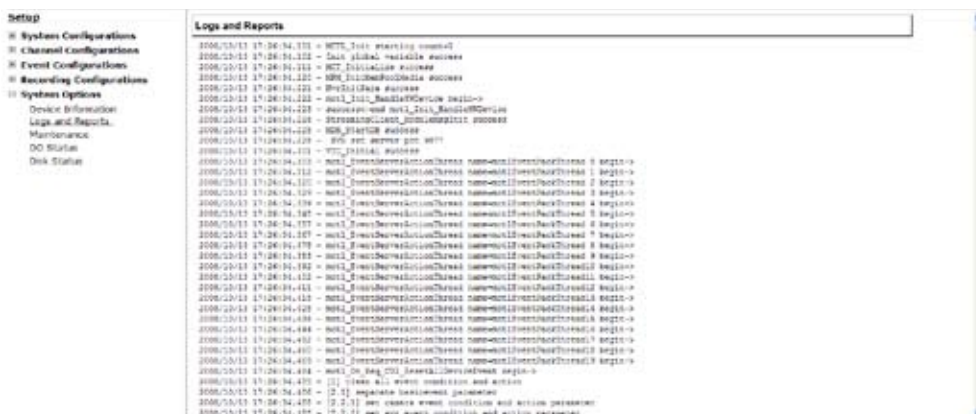
**Network Information**

Network Type: DHCP  
Device IP: 192.168.102.2  
HTTP Port: 80  
Streaming Port: 9877  
MAC Address: 00:28:68:78:31:03  
DHCP Server: Disabled  
UPnP Port Forwarding: Disabled

**Current DHCP Clients**

## 3.5.2 Logs and Reports

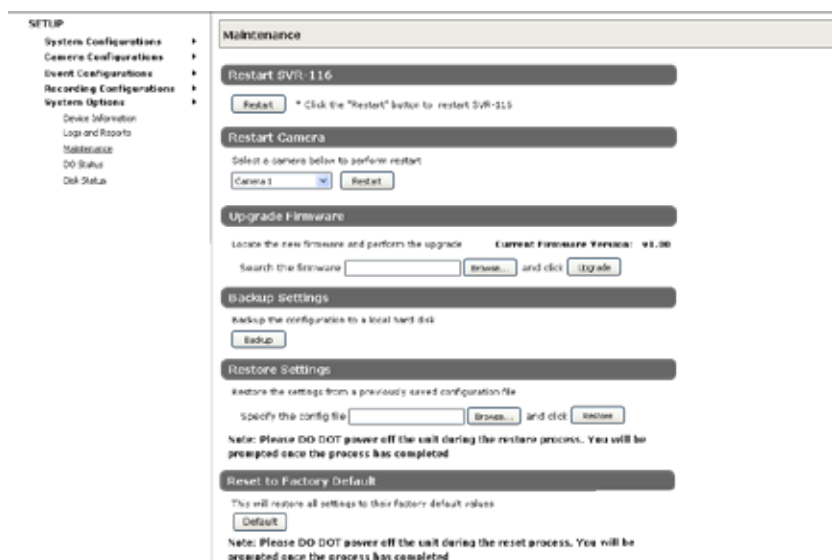
“Logs and Reports” keeps a record of what’s been happening to the device and provides basic information for troubleshooting



## 3.5.3 Maintenance

“Maintenance” provides functions for users to:

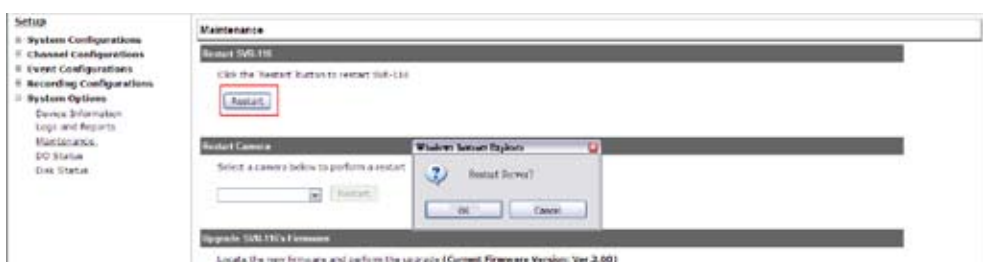
- Reboot the NVR when necessary
- Reboot cameras directly from the NVR
- Perform Firmware Upgrade
- Backup the NVR’s settings to a local hard drive
- Restore the NVR’s settings from a previously saved configuration file
- Reset the NVR’s settings to their factory default values



## Reboot the NVR

Reboot the NVR after you upload a new firmware. You would need to manually reboot the system for the new firmware to take effect. Such process would prevent a recording from getting interrupted because the system would not automatically reboot itself after the new firmware is loaded onto the recorder.

Simply click "Restart" to begin the reboot process and confirm the action:



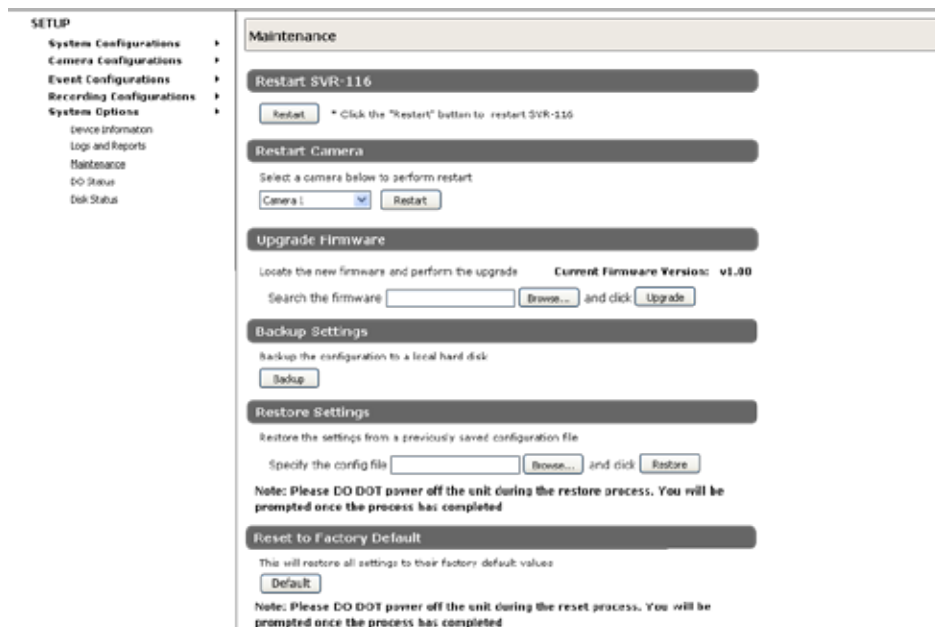
The restart process should be displayed and you should be prompted back to the "Maintenance" page after it is complete:





### Reset the NVR to Factory Default

To reset the recorder back to its factory default, click "Default" button and begin the process:



The process should be displayed and you should be prompted back to the "Live View" page after it is complete:



### 3.5.4 Disk Status

“Disk Status” gives you a more detailed information of the hard drive that is currently installed in the NVR.



Disk ID	Status	Capacity	Remaining Disk Space	Recording	Online Time	Recording Period	Est. Remaining Time
1	Offline	50GB	0GB	0%	—	—	—
2	Online	100GB	0GB	0%	May 01 2009 18:36:23	—	—

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